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On

Recovery and Renewal: Protecting the Capital Markets Against Terrorism Post 9/11

Committee on Financial Services

Subcommittee on Capital Markets, Insurance and Government Sponsored Enterprises

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## **I. Introduction**

Chairman Baker, Congressman Kanjorski and distinguished Members of the Subcommittee, I am Robert G. Britz, Executive Vice Chairman, President & Co-Chief Operating Officer of the New York Stock Exchange, Inc. (“NYSE” or “Exchange”). I lead the Exchange’s Equities Group, which is responsible for the day-to-day operation of our Trading Floor and our

data processing sites, for our technical infrastructure and software development and for our information business. I also head the Exchange's International Group, which is responsible for developing new NYSE listings of non-U.S. companies. In addition, I serve as the Chairman and CEO of the Securities Industry Automation Corporation ("SIAC"), the NYSE's technology subsidiary.

On behalf of the NYSE and our Chairman, Richard A. Grasso, I thank the Subcommittee for providing this forum to discuss business continuity and contingency planning in conjunction with the release this afternoon of the General Accounting Office's ("GAO") report.

The report released by the GAO today is the result of more than seventeen months of work that included reviewing the business continuity plans, physical and information security measures of the NYSE and SIAC. The GAO conducted a dozen visits and follow-up telephone calls with us. We would like to thank the GAO staff for their professionalism throughout this important review.

## **II. Business Components**

There are seven critical business components required for NYSE trading:

1. The NYSE's Trading Systems - located in two, separate, active data centers that are designed to recover and resume trading intra-day after the loss of one data center;
2. The NYSE's Trading Floor - one primary Trading Floor and one backup Trading Floor located in two New York City boroughs. Trading can resume in less than 24 hours after the loss of the primary Trading Floor;

3. NYSE Member Firm connectivity to the NYSE's information technology infrastructure - required for receiving orders, transmitting quotes and reports and receiving post trade data;
4. Specialist and Member Firm Trading Floor personnel;
5. Market Data Dissemination to the Public - includes SIAC's ability to transmit this data to market data vendors and the vendors' ability to provide it to the public;
6. Liquidity Providers - Upstairs member firm and specialist personnel; and the
7. Clearance and Settlement Processes - these systems are hosted and operated by both SIAC and the Depository Trust Clearing Corporation (DTCC).

### **III. Critical Infrastructure**

The NYSE has a long history of developing forward-looking business continuity strategies that harden our physical and information technology (IT) infrastructure and improve our ability to withstand or recover from a disaster.

All of our facilities have emergency generator backup and store water onsite to enable continued operations after the loss of power or water. If we lose our natural gas service we can operate on fuel oil. We connect our IT infrastructure with a private extranet that utilizes geographically redundant fiber routes. The NYSE and its subsidiaries employ large security forces and invest in automated security systems to protect the infrastructure. Significant investments have been made in information security personnel and infrastructure to protect our systems from intrusions and attacks while enabling our business partners to connect to the NYSE IT infrastructure in a secure manner. Our primary Trading Floor is actually five different

Trading Floors located in four different buildings. Trading can be moved from one location to another as may be necessary.

#### **IV. Contingency Planning**

Contingency planning has played a key role at the NYSE for many years. Our plans include redundant, active data centers served by different power grids and multiple telecommunications central offices, with each site sharing daily the processing load generated by the trading of about 1.4 billion shares. All of our facilities have back-up power generators and uninterruptable power source (UPS) systems. All of our facilities are interconnected through a diversely routed private fiber optic network that does not pass through any phone company central office.

We have a back-up Trading Floor, developed at a cost of approximately \$25 million dollars and 30 person years. This alternative venue would support the trading of all NYSE-listed equity securities, without modifications to the NYSE's market structure model, on a next-day basis should an event disable the primary Trading Floor. Support is provided for both specialist and brokers and a full suite of trading applications.

The NYSE has strengthened its physical security in and around the primary Trading Floor at the Exchange's headquarters and our data centers. We are committed to protecting the safety of all personnel at the NYSE. In close cooperation with Federal, state and local law enforcement, the Exchange has expanded its physical security perimeter. We have also taken measures to increase the screening of all people, package deliveries and mail that enters the NYSE or our data centers, and we have instituted a more restrictive policy on visitors and deliveries.

The NYSE employs a rigorous information security infrastructure to ensure the reliability of all information that we receive, process, and disseminate to the world every day. We employ external perimeters, intrusion detection, internal access controls, and we conduct penetration testing by using “friendly” hackers. SIAC chairs the Financial Services Information Sharing Analysis Center (ISAC) that works with government agencies to identify and assess potential threats and to respond to actual threats.

As a self-regulatory organization (“SRO”), the NYSE has filed with the SEC proposed NYSE Rule 446, which would mandate that NYSE member firms specifically define and continuously update business continuity plans. Once approved by the Commission, the NYSE’s Member Firm Regulation Division will review member firm business continuity plans as part of the NYSE’s ongoing and rigorous examination practices.

We have initiated a program to improve coordinated communication with Federal agencies as well as NYSE members and staff. We have created an Emergency Notification System that will forward to our member firms alert messages received from the Department of Homeland Security or the SEC. The Exchange has established new 800 numbers and websites for disseminating emergency information to its members and staff and is developing a secure contingency website for members and staff to report their status after an emergency.

## **V. Communications Redundancy**

The NYSE and SIAC have launched Secure Financial Transaction Infrastructure (“SFTI,” pronounced “safety”), a private extranet to serve the financial industry. SFTI provides diverse, fully redundant routing to the SIAC data centers for the member firms and national market participants that are connected to the NYSE, American Stock Exchange (“AMEX”), National Market System (“NMS”) and DTCC IT infrastructure. Following September 11, 2001,

U.S. equities trading was interrupted because many broker-dealers lost their connectivity to the markets due to damage suffered by a major central telecommunications switching facility at Ground Zero. SFTI addresses this by enabling member firms to connect to the NYSE's data centers via fiber-optic connections to multiple access centers throughout the New York tri-state region, as well as in other financial centers in Boston and Chicago.

Instead of running circuits directly to SIAC, users will connect to multiple Access Centers via their carrier(s) of choice, eliminating the need to rely on a single telecommunications route. Once the communication reaches the Access Center, SFTI will carry the signal to SIAC via geographically and physically diverse fiber route pathways.

SFTI possesses no single point of failure. All of SFTI's equipment, connections, power supplies, network links and Access Centers are redundant and its architecture features independent, self-healing fiber-optic rings. If a SFTI fiber pathway is compromised, financial data traffic will continue to move uninterrupted along another route.

## **V. Unlisted equities**

The NYSE is ready to trade the top 250 Nasdaq stocks, which comprise almost 80 percent of Nasdaq's average daily volume. All NYSE systems have been modified and can support the four character symbols used by such unlisted stocks. Testing with the NYSE's member firms is underway and will conclude in the second quarter. The NYSE will schedule semi-annual production tests with all affected systems to enhance continued readiness to trade Nasdaq stocks. We believe that our current capacity model and our continuing enhancements to our capacity would be adequate. It should be noted that the NYSE's capacity is approximately five times our current average daily volume, which is approximately 1.4 billion shares. With the recent addition of capacity-on-demand from our technology vendors, our capacity is more than

adequate to handle our message traffic as well as the additional message traffic for the top 250 Nasdaq securities.

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The NYSE is committed to ensuring that the U.S. capital markets remain the envy of the world. In the event of another terrorist attack or catastrophe, the NYSE plans to resume trading in a timely, fair and orderly fashion that will provide every single one of America's 85 million investors with access to the finest system of enterprise that the world has ever known. We will continue to work with the SEC, the NYSE's member firms, and the entire securities industry to address threats and to implement strategies and solutions. I hope the foregoing is helpful to the Subcommittee. We look forward to working with you and the Financial Services Committee on issues affecting the capital markets. Mr. Chairman, I want to thank you for the opportunity to present this testimony. I would be happy to answer any questions.